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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,655	10/27/2003	Hsien-Chang Lin	JCLA8714	4053
7590 09/01/2005				
J.C. Patents Suite 250 4 Venture Irvine, CA 92618		EXAMINER THOMPSON, CAMIE S		
		ART UNIT 1774		

DATE MAILED: 09/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/695,655

Applicant(s)

LIN ET AL.

Examiner

Camie S. Thompson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on Amendment filed on June 21, 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. Applicant's amendment and accompanying remarks filed June 21, 2005 have been acknowledged.
2. Examiner acknowledges amended claims 1 and 8.
3. Examiner acknowledges cancelled claims 7 and 13-19.
4. The rejection of claims 8 and 19 under 35 U.S.C. 112, second paragraph is withdrawn due to applicant's amended claim 8 and cancelled 19.

### *Claim Rejections - 35 USC § 102*

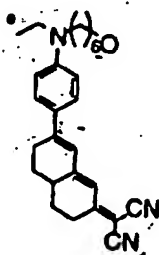
5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-6 and 8-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Jen et al., "Polyquinolines: Multifunctional Polymers for Electro-optic and Light-Emitting Applications".

The reference discloses the use of a non-linear optical chromophore with the following structure



The structure listed above and found in the reference reads on compound represented in the instant claims when B and C are cyano; A is a substituted cyclohexene and Z is an electron donating group, -N(ethyl) (CH<sub>2</sub>)<sub>6</sub>-O per instant claims 1-3. The chromophore can be used in the luminescent layer of a light emitting device that comprises an indium tin oxide substrate on to a top electrode (see page 473). Additionally, the reference discloses that CuPc is used in the hole injection/transport layer (see page 476). Also, page 477 of the reference discloses a multilayer light emitting diode comprising a cathode. Figures 5 and 6 on page 477 of the reference disclose Alq<sub>3</sub> in the organic electroluminescent layer. An electron-transporting layer is disclosed in the reference on page 476. The reference also discloses that the organic electroluminescent layer can comprise an aromatic amine such as TPD. The reference discloses optical thin films of the polyquinolines have a thickness in the range of 1-2 μm (see page 473).


### *Response to Arguments*

7. Applicant's arguments filed June 21, 2005 have been fully considered but they are not persuasive. In the previous Office Action, examiner indicated allowability of claim 7. Examiner regrets the withdrawal of allowability. Applicant cancelled claim 7 and incorporated claim 7 into claim 1. The thickness of the optical thin films of side chain polyquinolines is disclosed in the reference. The reference discloses that the thickness is from 1-2μm. Applicant claims a range of 1 nm to about 1 μm. The reference does read on all the limitations of claim 1.

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Any inquiry concerning this communication or earlier communication from the examiner should be directed to Camie S. Thompson whose telephone number is (571) 272-1530. The examiner can normally be reached on Monday through Friday from 7:30 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena L Dye, can be reached at (571) 272-3186. The fax phone number for the Group is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
RENA DYE  
SUPERVISORY PATENT EXAMINER  
A.U. 1774 8/29/05